

IN THE CLAIMS

Please amend the claims to read as follows:

Listing of Claims

1. (Original) A method for transmitting data from a transmitter to a receiver of an ARQ communication system comprising the steps of:

encoding data received from a signal source using a forward error correction (FEC) code to generate Galois field (GF) symbols;

mapping the GF symbols using quadrature phase shift keying (QPSK) as modulation scheme;

transmitting the QPSK modulation symbols to the receiver;
and

retransmitting modified QPSK modulation symbols to the receiver.

2. (Original) The method according to claim 1, wherein the modified QPSK modulation symbols are obtained by modifying the GF symbols prior to QPSK modulation.

3. (Original) The method according to claim 2, wherein the modification is obtained by an arithmetic operation.

4. (Original) The method according to claim 3, wherein the arithmetic operation is a multiplication of the GF symbols with a varying multiplier.

5. (Original) The method according to claim 4, wherein the multiplier is related to a transmission number.

6. (Original) The method according to claim 1, wherein the modified QPSK modulation symbols are obtained by mapping the GF symbols using a different QPSK modulation scheme.

7. (Currently Amended) The method according to ~~one of~~ claim[s] 1 ~~to 6~~, wherein the modification of the QPSK modulation symbols is selected such that a maximum uniform distribution of the accumulated euclidean distance between the symbols is obtained.

8. (Currently Amended) The method according to ~~one of~~ claim[s] 1 ~~to 7~~, wherein the GF symbols are GF(4) symbols, which are obtained either directly from the encoding operation or after conversion of GF(2) encoder symbols prior to QPSK modulation.

9. (Currently Amended) A transmitter for use in an ARQ communication system comprising:

a forward error correction (FEC) encoder ~~{120}~~ for receiving data from a signal source ~~{110}~~ and generating Galois field (GF) symbols;

a mapping unit ~~{130}~~ for mapping the GF symbols using QPSK as modulation scheme; and

a transmission unit ~~{100}~~ for transmitting QPSK modulation symbols and modified QPSK modulation symbols to a receiver.

10. (Currently Amended) The transmitter according to claim 9, wherein the mapping unit ~~{130}~~ comprises a plurality of mappers with ~~{130-1...130-3}~~ different modulation schemes to generate the modified QPSK modulation symbols in accordance with a transmission pattern.

11. (Currently Amended) The transmitter according to claims 9 or 10, further comprising a multiplication unit ~~{121}~~ for multiplying the GF symbols using a multiplier, which is related to a transmission number.

12. (Currently Amended) The transmitter according to ~~one of~~ claim[s] 9 to ~~11~~, further comprising a converter for converting encoded GF(2) symbols into GF(4) symbols.

13. (Currently Amended) A receiver in an ARQ communication system comprising:

a demapping unit ~~(210)~~ for demapping received GF symbols modulated with QPSK as modulation scheme, said demapping unit being adapted to demodulate GF symbols, which have been modified in accordance with a transmission pattern; and

an FEC decoder ~~(220)~~ for decoding and combining the output of said demapping unit.

14. (Currently Amended) The receiver according to claim 13, wherein the demapping unit ~~(210)~~ comprises a plurality of demappers with different demodulation schemes selected in accordance with a transmission pattern.

15. (Original) The receiver according to claim 13 or 14, further comprising a multiplication unit for multiplying the GF symbols using a multiplier, which is related to a transmission number.

16. (Currently Amended) The receiver according to claim[s] 13 to [15], wherein the FEC decoder ~~(220)~~ performs error decoding on the principle of euclidean distances in the complex signal space.

17. (Currently Amended) A communication system comprising a transmitter according to claim[s] 9 to ~~12~~ and a receiver according to claims 14 to 16 comprising (i) a demapping unit for demapping received GF symbols modulated with QPSK as modulation scheme, said demapping unit being adapted to demodulate GF

symbols, which have been modified in accordance with a
transmission pattern, and (ii) an FEC decoder for decoding and
combining the output of said demapping unit.